IN THE SEATTLE MUNICIPAL COURT
KING COUNTY, STATE OF WASHINGTON

CITY OF SEATTLE,

Plaintiff,

vs.
Greeley, John
Ho, Nancy
Keating, John
Miller, Heather
Robinson, Sarah

Defendant.

NO. 516472, 512737, 515707, 515632, 518005

MEMORANDUM OPINION

FINDINGS OF FACT

1. Each of the defendants was arrested for driving under the influence and each submitted to a breath test.

2. Breath test instruments in the State of Washington include the BAC DataMaster and the BAC DataMaster CDM (hereinafter collectively referred to as the DataMaster). The DataMaster utilizes a simulator solution during the initial phases of the breath test to determine whether the breath test instrument is accurately measuring breath alcohol content. The simulator, with a .08 external standard simulator solution, is attached to the Datamaster. Between a subject's two breath samples, the DataMaster measures the known alcohol vapor content of the simulator solution. The alcohol vapor content of the simulator solution should measure between .072 and .088.

3. Dr. Barry Logan was the Director of the Forensic Laboratory Services Bureau of the Washington State Patrol. He served in this capacity from 1999 until his resignation in 2008. Prior to 1999 he served as the Washington State

Toxicologist. In 1999 the State Toxicology Lab merged with the Washington State Patrol. The Toxicology Laboratory is one of eight laboratories within the Bureau.

4. Ann Marie Gordon (AMG) joined the Toxicology Laboratory in 1998 and became the Lab Manager in 2000. She resigned in July 2007. As Lab Manager, she was responsible for the day to day operations of the laboratory. She oversaw procedures that were being implemented and wrote standard operating procedures. She trained the new toxicologists that were hired and dealt with budget issues.

5. One function of the Toxicology Laboratory is to prepare and certify simulator external standard solutions used in the administration of the Washington State Patrol breath testing program.

6. Simulator external standard solutions are used as controls during the administration of a breath test to ensure the DataMaster, is operating correctly.

7. A properly administered breath test consists of a blank test, the verification of an internal standard, a subject sample, a blank test, a test of an external standard simulator solution, a blank test, a subject sample and a blank sample.

8. A properly administered breath test can yield an accurate and reliable measure of a person's breath alcohol concentration.

9. The testing of a simulator external standard solution is an essential requirement of a properly administered breath test.

10. Simulator external standard solutions are prepared and certified in accordance with Dr. Logan's "procedure for the preparation of 0.08 simulator external standard solution for use with a breath test instrument."

11. This procedure for the preparation of the 0.08 simulator external standard solutions for use with a breath test instrument was promulgated by Dr. Logan as directed by RCW 46.61.506(3).

12. Three sets of protocols govern the simulator solution certification process.

13. The Toxicology Laboratory prepares and certifies up to sixty or more simulator external standard solutions a year.

14. The certification of an simulator external standard solution requires the following: (1) An individual with a valid Blood Analyst Permit, authorized by the State Toxicologist, analyzes five separate aliquots of the simulator solution, by headspace gas chromatography; (2) Record the results of the testing in the solution certification database, including the date and the results of the contemporary external control; (3) A minimum of three analysts must certify the solution prior to its certification; (4) The average of the results from all of the

analysts are computed (rounded to four decimal places). The standard deviation and relative standard deviation (CV) on all results are computed. (5) The solution is acceptable for use and therefore certified if it meets the following criteria. The average solution concentration must be between 0.098 and 0.108g/100mL inclusive. The CV must be 5% or less; (6) The reference vapor concentration is calculated by dividing the solution concentration by 1.23 and rounding to four decimal places; (7) A solution is valid for use for a period of one year following its preparation.

15. The Datamasters are periodically checked, calibrated and maintained by the Washington State Patrol in a QAP procedure. The QAP procedure also uses a simulator solution.

16. It is the custom and practice of the Toxicology Laboratory to have every available analyst certify each and every simulator external standard solution so the analyst can testify in court about the preparation and certification of the simulator external standard solution.

17. It is the custom and practice of the Toxicology Laboratory to have every analyst who certified a simulator external standard solution to sign a worksheet with the results of their analysis located thereon.

18. It is the custom and practice of the Toxicology Laboratory to have every analyst who certified a simulator external standard solution to sign a DataMaster 0.08 Simulator Solution Certification. This certification, in part, says the signor personally examined and tested the solution in question. This certification is signed under penalty of perjury.

19. Every analyst in the Toxicology Laboratory knew that AMG was participating in the certification of the simulator external standard solutions because they saw her name on the worksheets used to record the results of the testing of the simulator external standard solutions.

20. When Ms. Gordon became the Laboratory Manager in 2000, she informed Dr. Logan of a concern that she had with the previous Lab supervisor, David Predmore. Mr. Predmore had another analyst testing simulator solutions in Mr. Predmore's name. Dr. Logan informed Ms. Gordon that it was his expectation that analysts would test their own solutions. The purpose of this was to facilitate record keeping, but otherwise nothing was compromised scientifically because the simulator solution data was backed up by chromatograms.

21. Sometime in 2003 Ed Formoso ("EF") became responsible for sending out simulator external standard solutions to breath test technicians for use in the WSP breath testing program. EF noticed that it was difficult to send out simulator external standard solutions on a timely basis because AMG would take so long to certify the solutions. Therefore, in 2003 EF started drawing and testing the five aliquots that were reportedly tested by AMG.

22. Beginning in 2003, AMG would sign the worksheet and sign the DataMaster 0.08 Simulator Solution Certification. Between February 5, 2004, and February 28, 2007, AMG signed forty-eight DataMaster 0.08 Simulator Solution Certifications under penalty of perjury even though she did not test each of those solutions.

23. Melissa Pemberton tested simulator solution batch number 05017 for EF and AMG.

24. Estruardo Miranda knew that EF was testing simulator solutions for AMG for at least one year.

25. Estruardo Miranda testified that it was generally know that AMG was not testing 0.08 simulator external standard solutions herself.

26. On March 15, 2007 the Washington State patrol anonymous tip line received an anonymous call which stated that the "Simulator solutions are being falsified as far as the certification". The tip was forward to Dr. Logan, who was provided a transcript of the tip. It was received into his office on March 22, 2007. He assigned AMG to investigate the tip. Ms. Gordon enlisted EF to assist her.

27. When AMG and EF met, they agreed that EF would no longer perform tests on her behalf.

28. AMG told Dr. Logan that she did not perform tests but that she signed the forms.

29. When EF and AMG met to discuss the investigation of the March 15, 2007, "tip" they intentionally decided not to reveal that EF was testing simulator external standard solutions for AMG. EF and AMG then produced the April 11, 2007, interoffice communication revealing the results of their investigation. Both EF and AMG signed the April 11, 2007, interoffice communication.

30. On July 9, 2007 The Washington state Patrol received an anonymous tip that stated, "AMG doesn't really certify all those simulator solutions. If you look in the file you'll find a grammatagram with her name on it, but if you also check over the years of where she really was on the days that those things were certified you'll find once in a while she was in DC or Alaska, or somewhere else. She had somebody else do it and then she'll sign the forms that says, under penalty of perjury I analyzed this. If you don't think that's a big deal just think what Francisco Duarte would think of that." On July 10, 2007, Deputy Chief Paul Beckley assigned this second "tip" to Dr. Logan for investigation. Dr. Logan then revealed the actions of AMG and EF. This revelation led to a criminal investigation into the actions of AMG and EF.

31. After AMG resigned from the lab, Dr. Logan was asked by a prosecutor to evaluate what the effect would be of removing results attributed to Ms. Gordon from the calculations on the simulator solution worksheets. During this review, it was discovered that because of an error in the software, only the results of 12

analysts were calculated to determine the mean alcohol concentration of the simulator solution. Because the computer was not including in the calculation the results of "all the analysts", the mean alcohol concentration and the standard deviation values contained on the worksheets were determined to be inaccurate.

32. A member of the Toxicology Lab IT staff, Sandra Destefano, updated the program to include the results of "all the analysts" and the values were automatically recalculated. The results of the recalculations were still well within the range of values required by the protocols. This information was immediately posted on the Washington State Patrol Breath Test Section website. Ms. Destefano did not testify in these proceedings. The toxicologists are not trained or able to check software calculations.

33. After the software error was discovered, the Toxicology Lab staff identified some additional errors that caused Dr. Logan to initiate a process to check all the data relating to the preparation and testing of simulator solutions and quality assurance procedure solutions. This data review was conducted by Rod Gullberg and Trooper Ken Denton, both of whom are employed by the Washington State Patrol Breath Testing Section and possessed the qualifications to conduct such a review.

34. Field solution #05008 used as a QAP solution includes data from AMG. If her data were removed, the solution falls outside the acceptable range. The tests conducted using machines calibrated with this solution number 1679.

35. The toxicologists who did testify did not check any of the results submitted in the exhibits of the corrected data.

36. Other errors were discovered. On at least four occasions, CrRLJ 6.13 certificates contained testing dates that preceded solution preparation dates because the preparation date contained on the worksheet was auto-filled when the computations were completed. The office staff preparing the declarations used the date contained on the worksheet instead of the actual preparation date. On four other occasions, quality assurance solution declarations contained incorrect mean alcohol concentrations, again a result of an incorrect entry by office staff preparing the declarations. Toxicologists did not check the data before signing under penalty of perjury.

37. Eventually three different software or programming errors were discovered, the failure to include all the toxicologists, the failure to utilize the fourth data point from the fourth toxicologist in computing the CV, and an error in File Maker Pro which caused EVC to be incorrectly rounded in some circumstances. These errors based on software miscalculations existed over the time period August 2005 through August 2007.

38. Toxicologists Nuwayhid and Noble signed the declarations for solutions 06042, 06044, 06045, 06046 and 06047 a second time in October 2007.

39. Toxicologists Nuwayhid and Noble again failed to check the correctness of the

values reported before resigning the declarations for solutions 06042, 06044, 06045, 06046 and 06047.

40. The values reported for solutions 06042, 06044, 06045, 06046 and 06047 are still incorrect.

41. In an attempt to justify her rejection of certification data for solution 06028, Noble submitted a declaration under penalty of perjury in the King County proceedings stating that she had had a physically justifiable reason for doing so.

42. After a brief examination of her chromatograms, Noble admitted that her explanation, although submitted under penalty of perjury, could not be true.

43. Not a single toxicologist ever checked the computer's certification calculations to determine whether they were correct before testifying that certified solutions satisfied the protocols.

44. There are at least 170 non-software related errors committed by toxicologist in certifying simulator solutions in the record. These include:

    1. Misrecording and reporting of data.

    2. Mixing up solutions.

    3. Signing off on someone else's data.

    4. Using data that should have been discarded due to a stuck injector needle.

    5. Entering incorrect values for controls.

    6. Failing to record the lot number and expiration data of the external control in certification.

    7. Signing declarations indicating solutions were tested before they were prepared (a physical impossibility).

    8. Signing declarations indicating solutions which were dated before the solutions were tested.

45. ISO and NIST standards contain the requirements that every laboratory must meet to be technically competent and able to generate technically valid results.

46. These standards are "applicable to all organizations performing tests and/or calibrations."

47. ISO, NIST and ASTM standards are applicable to, and recognized by, the forensic breath testing community.

48. Compliance with such standards ensures a lab is applying standards and

principles of practice that are consistent with the norms within the forensic toxicology community.

49. Prior to October toxicologists never checked to ensure data was recorded accurately in certifications.

50. The October (10/05/07) protocols institute systematic checks on data transfers.

51. The first solution certified under these protocols is 07056.

52. Quantitative Impacts – Example: Changes in EVC due solely to inclusion of incorrect data value:

    1. Δ EVC: .0001

        i. Solutions 02035 (Field), 05032 (QAP) & 06015 (QAP).

        ii. Number of tests affected statewide is unknown.

53. Quantitative Impacts – Example: QAP solution 06037.

    1. Software error – simple calculation check (AC/1.23) would have revealed.

    2. EVC prior to correction: .0400.

    3. EVC when corrected: .0395.

    4. Error between the reported value and true value is 1.3%, forensically indefensible.

    5. At least 15 DataMaster QAPs were performed utilizing this solution.

    6. Minimum number of tests performed utilizing these Data Masters: 2,691.

54. The Lab's software was never checked, verified or validated so that software error went undetected until October 5, 2007.

55. The software relied upon by the Lab was programmed in-house by the Lab to perform statistical operations by IT personnel who were neither statisticians nor scientists.

56. The Lab's programming and reprogramming was never checked, verified or validated by anybody so that software errors went undetected until August 2007.

57. Quantitative Impacts – Example: Changes in Field Solution EVC – Software error.

    1. Δ EVC: .0006

i. Solution 06048.

2. Δ EVC: .0002

    i. Solution 05041, 06026, 06027, 06030, 07007, 07016, 07023.

3. Δ EVC: .0001

    i. Solution 05036, 06025, 06029, 06031, 06036, 06041, 06043, 06049, 06054, 07001, 07015, 07017.

4. Number of tests performed utilizing these solutions as an external standard has not been determined.

58. Standards require:

    1. Absent an identifiable physical circumstance that would cause a measurement to be inaccurate, data cannot be discarded unless the rejection is "based on accepted statistical principles."

    2. If a lab is going to permit the rejection of data based on statistical criteria, it must develop uniform "policies on treatment and investigation of statistical outliers."

    3. The most widely used outlier test is the ratio of the difference between the suspected outlier and the mean of the data to the standard deviation:

$$C = | X_{o1} - M | / SD$$

    4. If data is rejected simply because it is not what is anticipated, without any physical or statistical basis, computations based on the remaining data will not reflect scientifically valid measures of the quantity of interest.

59. Prior to the December (12/18/07) protocols, the Lab had no criteria for outlier analysis.

60. Prior to December 2007, several toxicologists discarded data without identifiable or statistical reasons for doing so.

61. The December (12/18/07) protocols adopt the outlier criteria above where c = 3.3 for Field solutions and C = 3.8 for QAP solutions.

    1. Under the criteria adopted by the Lab, if there are more than two outliers in the data for any solution certification then the entire solution, and not just a single analyst's data, must be discarded and the solution not used for any purpose.

    2. This is the appropriate scientific methodology accepted throughout the scientific community.

62. The first solution certified under these protocols is 08001.

63. Quantitative Impacts – Example: QAP solution 06028 – Discarding Valid data.

1. Lisa Noble had no physical or statistical reason to discard data for solution 06028.

2. As a result, solution 06028 was never properly certified.

3. At least 32 DataMaster QAPs were performed utilizing this solution.

4. Minimum number of tests performed utilizing these DataMasters: 3,445.

5. Even if the State were permitted to substitute the discarded data back into the worksheet and retroactively certify this solution, this would have three primary consequences:

    i. This introduced an error in the reported bias from every QAP of .0015.

    ii. The error between the reported and correct value is 1.9% and forensically indefensible.

    iii. How many tests are affected by this error is unknown.

    iv. At least three DataMasters would fail their QAPs because they could not satisfy the ± 5% QAP accuracy requirement.

        1. Approximately 244 tests were performed on these instruments.

64. Impacts – Example: Field solution 07028 – Discarding Valid data.

1. Brian Capron had no physical or statistical reason to discard data for solution 07028.

2. As a result, solution 07028 was never property certified.

3. Number of tests performed utilizing this solution as an external standard has not been determined.

65. Impacts – Example: Field solution 07031 – Certification of scientifically invalid solution.

1. Brianna Peterson had no physical reason to discard data for solution 07031.

2. As a result, her data was required to be included in the solution certification subject to the scientifically appropriate outlier analysis.

3. Her data contained four outliers.

4. This required solution batch 07031 to be discarded.

5. It was certified and remains in the field.

6. Number of tests performed utilizing this solution as an external standard has not been determined.

66. Standards require:

1. When an "experimenter is clearly aware that a gross deviation from prescribed experimental procedure has taken place, the resultant observation should be discarded."

67. A low ISTD area in a chromatogram is an indication that a chromatograph has a stuck injection needle (is not functioning properly);

i. The ISTD area must be at least 1,000 for tests prior to June, 2006 and 900 thereafter;

ii. If any result in a certification set does not meet the requirement, the entire set is unacceptable and the data must be rejected.

68. At least 13 solutions have been certified utilizing data, from chromatograph 1 that should have been discarded due to low ISTD areas and deployed in the field as external standards.

69. 08001 – First solution certified under December protocols which include criteria for the rejection of data. First solution certified after chromatograph 1 repaired. (December 18, 2007)

70. The Washington State Crime Lab was evaluated in October of 2007 by Michael Hurley of the American Society of Crime Laboratory Directors. The audit revealed that:

1. There were not the same standards in operation or quality for the breath test function as for the rest of the lab,

2. there was little or no communication between the breath test unit and the rest of the lab,

3. the external standard solution had been used in the QAP as a verification solution,

4. there was a lack of documentation in the breath test unit,

5. the breath test function had not been previously evaluated by external or internal audits,

6. there was a lack of security for the database in which the solution results were entered, and

7. by December 19, 2007 the majority of the concerns of the audit had been complied with.

CONCLUSIONS OF LAW

This Court heard a prior motion which was based upon testimony taken in Seattle Municipal Court and a record from the Skagit County District Court. The issues were whether the Court should suppress BAC readings based upon governmental misconduct or under Evidence Rule 702. The Court granted the motion pursuant to Rule 702. See City of Seattle v J. Chausee 502061 et al. The Court has now heard a motion to suppress BAC readings under Evidence Rule 702 based upon a record from Seattle District Court. The record was duplicative in some respects but revealed the following salient facts:

1. The resigned certificates were still incorrect in some instances.

2. There was a problem with chromatogram number 1 and the toxicology lab continued to use it to test solutions. These solutions were used in the field and in QAP's.

3. There are additional software errors regarding the equivalent vapor concentration and the FileMaker Pro program.

4. Denton and Gullberg, the experts used by the lab, believed that the prosecutors should not rely on any solution earlier than 07025.

5. Ann M Gordon's solution tests are affecting some QAP procedures.

6. The use and/or removal of Ann M Gordon's solution tests change the values of the solutions.

7. The audit of the toxicology lab in October of 2007 revealed that:
    a. there were not the same standards in operation or quality for the breath test function as for the rest of the lab,
    b. there was little or no communication between the breath test unit and the rest of the lab,
    c. the external standard solution had been used in the QAP as a verification solution,
    d. there was a lack of documentation in the breath test unit,
    e. the breath test function had not been previously evaluated by external or internal audits, and
    f. there was a lack of security for the database in which the solution results were entered.

Rule of Evidence 403 authorizes the Court to exclude relevant evidence if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury. Evidence Rules 702 and 703 address testimony of experts and the bases for expert opinion testimony. Generally, laboratory error is a matter of weight and not admissibility however, pursuant to ER 702, if the lab error or error rates are so serious that results are not helpful to the jury, the trial court may in its discretion rule the evidence inadmissible. The court may also consider issues of methodology and practices in laboratory settings. State v. Copeland, 130 Wn.2d 244, 922 P.2d 1304 (1996) State v. Cannon, 130 Wn.2d 313, 3225 (1996). The record in the matter before the Court demonstrates an alarming number of errors in following protocols, software errors, and data errors, questionable practices and failure to follow accepted scientific principles.

Under the holding of City of Fircrest v. Jensen, 158 Wn2d 384, 143 P3d 776 (2006), breath tests are admissible once the prime facie burden is satisfied. If a challenge is raised, the court then may further analyze the admission of the test under the evidence rules, in

particular ER 702. ER 702 requires that the witness be an expert and that the expert testimony be helpful to the trier of fact. Test results may be excluded as not helpful to the jury when laboratory error renders the results unreliable. Ordinarily such deviations go to the weight and not admissibility. See Lugvigsen v. City of Seattle concurring opinion Justice Madsen, 2007 Wash. LEXIS 953 (2007).

RW 46.61.506(3) requires that a valid breath test must be performed according to methods approved by the State Toxicologist. The court can consider the failure to follow the methods approved by the state toxicologist in determining whether a breath test is reliable. "The ultimate concern of the judiciary is that the methods approved result in an accurate test, competently administered, so that the defendant is assured that the test results do in fact reflect a reliable and accurate measure", State v Ford, 110 Wn 2d 827,833, 755 P2d 806 (1988).

This Court will adopt and concur in the analysis of the King County District Court in State of Washington vs. Ahmach, Sanafim et al no. C00627921, attached and incorporated by reference.

This Court will suppress the Breath test readings until Dec 18, 2007, Solution no 08001. At that time, Chromatograph 1 was repaired, protocols for outliners were in place and the majority of the concerns on the ASCLD audit had been complied with and tests or QAP procedures relying on data from Anne Marie Gordon would no longer be in use. (This court had previously suppressed breath test results relying on data from Anne Marie Gordon in Seattle v. Chaussee and in Seattle v. Ewing). The court will not admit the breath test result, finding it not helpful to the trier of fact, pursuant to ER 702. This ruling will apply to solutions back to 05008.

Dated this 16th day of May, 2008.

/s/	/s/
The Hon. Jean Rietschel	The Hon. Judith Hightower
/s/	/s/
The Hon. George Holifield	The Hon. Michael Hurtado